

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
8 July 2004 (08.07.2004)

PCT

(10) International Publication Number
WO 2004/056878 A2

(51) International Patent Classification⁷: C08F
(21) International Application Number: PCT/EP2003/014437
(22) International Filing Date: 18 December 2003 (18.12.2003)
(25) Filing Language: English
(26) Publication Language: English
(30) Priority Data:
102 61 252.8 20 December 2002 (20.12.2002) DE
60/451,836 4 March 2003 (04.03.2003) US

(71) Applicant (for all designated States except US): BASELL
POLYOLEFIN GMBH [DE/DE]; Brühlstrasse 60,
50389 Wesseling (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MIHAN, Shahram
[IR/DE]; Rossinistrasse 12, 67061 Ludwigshafen (DE).
LILGE, Dieter [DE/DE]; Max-Planck-Str. 7, 67117
Limburgerhof (DE).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,
MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,
RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished
upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.



WO 2004/056878 A2

(54) Title: COPOLYMERS OF ETHYLENE WITH α -OLEFINS

(57) ~~Abstract~~ Copolymers of ethylene with α -olefins which have a molar mass distribution M_w/M_n of from 1 to 8, a density of from 0.85 to 0.94 g/cm³, a molar mass M_n of from 10.000 g/mol to 4 000 000 g/mol and a CDBI of less than 50% and in which the side chain branching of the maxima of the individual peaks of the short chain branching distribution is in each case greater than 5 CH₂/1 000 carbon atoms, a process for preparing them, a catalyst suitable for preparing them and fibers, moldings, films or polymer mixtures in which these copolymers are present.